

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method of ~~validating a communication channel~~, comprising:  
measuring energy incident at a first frequency in a frequency spectrum ~~corresponding to~~  
associated with a channel ;

measuring energy incident at a second frequency in the frequency spectrum, wherein  
energy associated with at least some frequencies in the spectrum are not measured; but not all  
frequencies in the frequency spectrum; and

determining whether the energy measured at the frequency for at least one of the first or  
second frequencies exceeds a valid channel threshold ;

determining a bandwidth utilized by the channel based on the first and second  
frequencies; and

identifying a channel type based on the determined bandwidth.

2. (canceled)

3. (currently amended) The method of ~~validating a communication channel~~ of claim ~~[[2]]~~  
1, wherein ~~measuring energy incident at a frequency includes measuring energy at a frequency~~  
~~corresponding to a center of the frequency spectrum;~~

~~further comprising measuring energy at a second frequency corresponding to an edge of~~  
~~the frequency spectrum; and~~

~~wherein determining a bandwidth utilized by the channel includes doubling the frequency~~  
~~range from the frequency corresponding to the center of the frequency spectrum to the frequency~~  
~~corresponding to the edge of the frequency spectrum~~ the first frequency is associated with a  
center of the frequency spectrum, the second frequency is associated with an edge of the

frequency spectrum, and the determined bandwidth is associated with double the range between the center and edge frequencies.

4. (currently amended) The method of ~~validating a communication channel~~ of claim [[2]] 1, wherein ~~measuring energy incident at a frequency includes measuring energy at a frequency corresponding to a first edge of the frequency spectrum;~~  
~~further comprising measuring energy at a second frequency corresponding to a second edge of the frequency spectrum; and~~  
~~wherein determining a bandwidth utilized by the channel includes determining the frequency range from the frequency corresponding to the first edge of the frequency spectrum to the frequency corresponding to the second edge of the frequency spectrum~~ the first frequency is associated with a first edge of the frequency spectrum, the second frequency is associated with a second edge of the frequency spectrum, and the determined bandwidth is associated with the range between the first and second edge frequencies.

5. (currently amended) The method of ~~validating a communication channel~~ of claim 1, further comprising:  
~~measuring energy incident at a second frequency in the frequency spectrum;~~  
comparing the energy measured at the first frequency to the energy measured at the second frequency;  
identifying the channel as carrying analog data if the energies measured at the first frequency and the second frequency are disparate; and  
identifying the channel as carrying digital data if the energies measured at the first frequency and the second frequency are not disparate.

6. (currently amended) The method of ~~validating a communication channel~~ of claim 1, wherein the channel is valid if the energy measured ~~at the frequency~~ for at least one of the first and second frequencies exceeds the valid channel threshold.

7. (currently amended) The method of ~~validating a communication channel~~ of claim 1, wherein the channel is not valid if the energy measured ~~at the frequency~~ for at least one of the first and second frequencies does not exceed the valid channel threshold.

8. (canceled)

9. (currently amended) The method of claim [[8]] 1, further comprising selecting the frequency having the highest measured energy and assuming that a channel is centered near that frequency if at least one of the measured energies exceeds the valid channel threshold.

10. (original) The method of claim 9, further comprising searching for additional channels centered at a multiple of the bandwidth occupied by the channel from the frequency having the highest measured energy.

11-25. (canceled)

26. (currently amended) ~~An article of manufacture, comprising:~~  
[[a]] A computer readable medium having stored thereon instructions which, when executed by a processor, cause the processor to:

receive a plurality of samples of a communication signal, but fewer than all frequencies in a frequency spectrum corresponding to a channel of the communication signal;

combine the plurality of samples in a window;

determine positive and negative energy present in the window;

calculate an absolute value of the positive and negative energy present in the window;

and

compare the absolute value of the positive and negative energy present in the window to a valid channel threshold.

27. (original) The ~~article of manufacture~~ computer readable medium of claim 26, wherein the plurality of samples are a portion of a valid channel when the total energy is greater than the valid channel threshold.

28-29. (canceled)

30. (new) A method, comprising:

receiving a plurality of samples of a communication signal, but fewer than all frequencies in a frequency spectrum corresponding to a channel of the communication signal;  
combining the plurality of samples in a window;  
determining positive and negative energy present in the window;  
calculating an absolute value of the positive and negative energy present in the window;  
and  
comparing the absolute value of the positive and negative energy present in the window to a valid channel threshold.

31. (new) The method of claim 30, wherein the plurality of samples are a portion of a valid channel when the total energy is greater than the valid channel threshold.

32. (new) A computer readable medium having stored thereon instructions which, when executed by a processor, cause the processor to:

measure energy incident at a first frequency in a frequency spectrum associated with a channel;

measure energy incident at a second frequency in the frequency spectrum, wherein energy associated with at least some frequencies in the spectrum are not measured;

determine whether the energy measured for at least one of the first or second frequencies exceeds a valid channel threshold;

determine a bandwidth utilized by the channel based on the first and second frequencies;  
and  
identify a channel type based on the determined bandwidth.

33. (new) The computer readable medium of claim 32, wherein the first frequency is associated with a center of the frequency spectrum, the second frequency is associated with an edge of the frequency spectrum, and the determined bandwidth is associated with double the range between the center and edge frequencies.

34. (new) The computer readable medium of claim 32, wherein the first frequency is associated with a first edge of the frequency spectrum, the second frequency is associated with a second edge of the frequency spectrum, and the determined bandwidth is associated with the range between the first and second edge frequencies.